

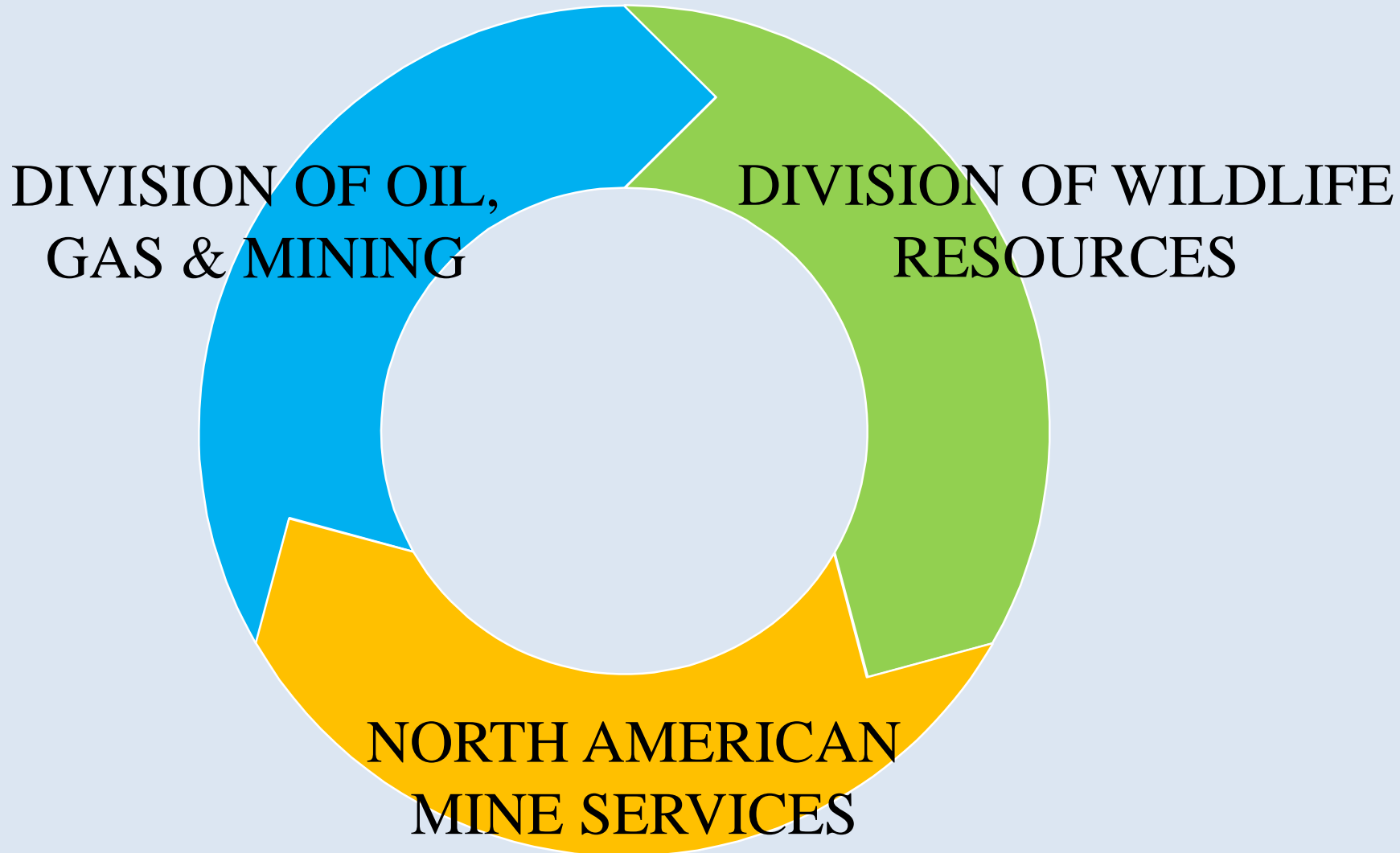
GREEN DIAMOND

PHOSPHATE EXPLORATION

UINTAH COUNTY, UTAH

2013 - 20??

WORKING TOGETHER



Green Diamond Project Team

- North American Mine Services
 - *Jay Gatten*
 - *Michele Sanders*
 - *Ryan DeMars*
 - *Stephen McKay*
 - *Oren Gatten*
- Utah Division of Oil, Gas and Mining
 - *April Abate*
 - *Paul Baker*
 - *Susan White*
- Utah Division of Wildlife Resources
 - *Brian Maxfield*

Why Explore for Phosphate Rock?

- Phosphate Rock (Rock with a high concentration of Phosphorous) is primarily used in agriculture as a component of fertilizer. N-P-K
- Concentrated Phosphorous is used for a wide variety of industrial chemicals
- Mineral Supplement for Livestock
- The United States imports most phosphate, primarily from Africa (Morocco).

Why Explore at Diamond Mountain?



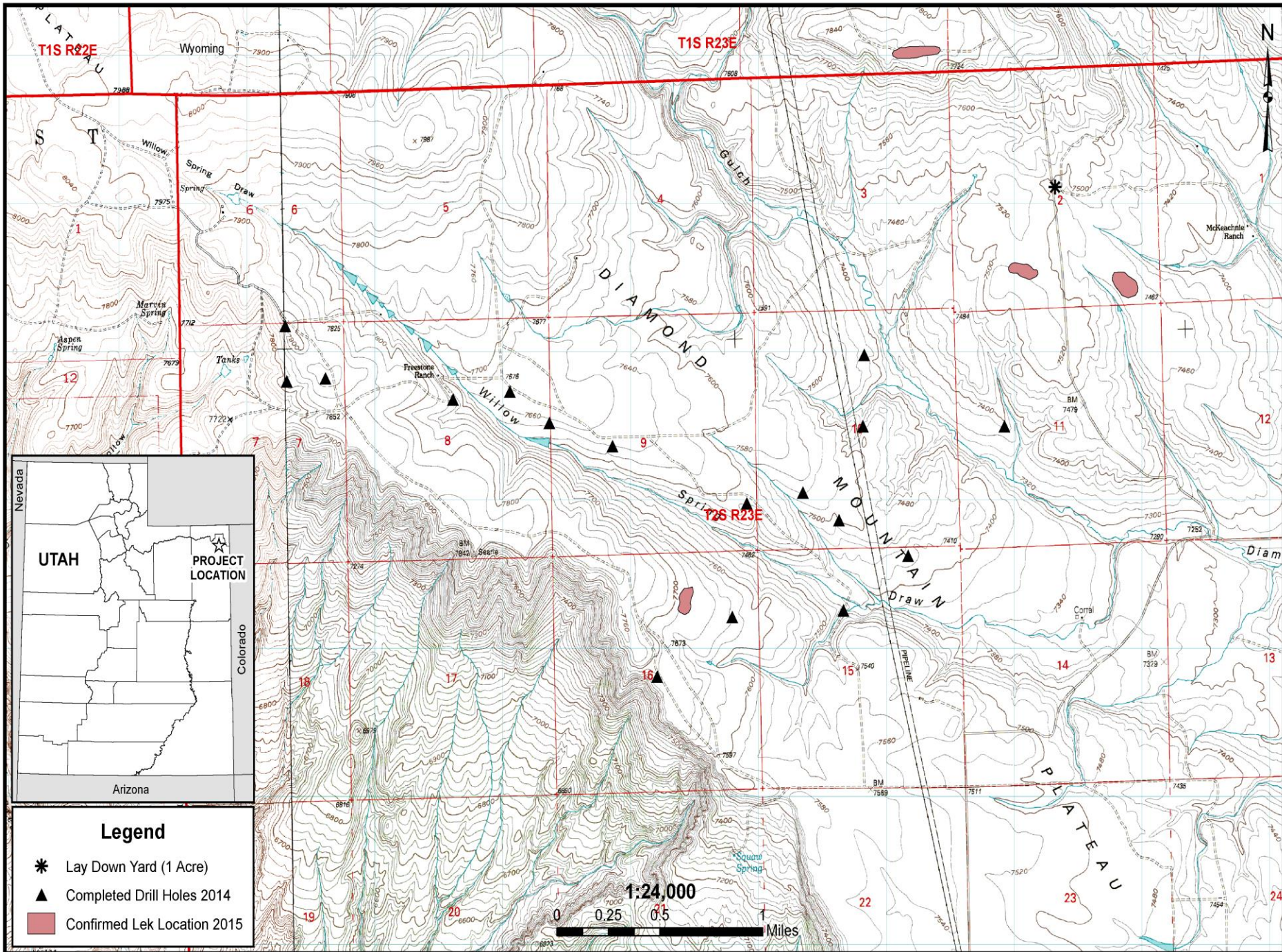
- Known Phosphate Resource (US Steel 1960's)
- Favorable lease opportunity for Utah School and Institutional Trust Lands Administration
- Surface land owners are in favor of profitable land development.

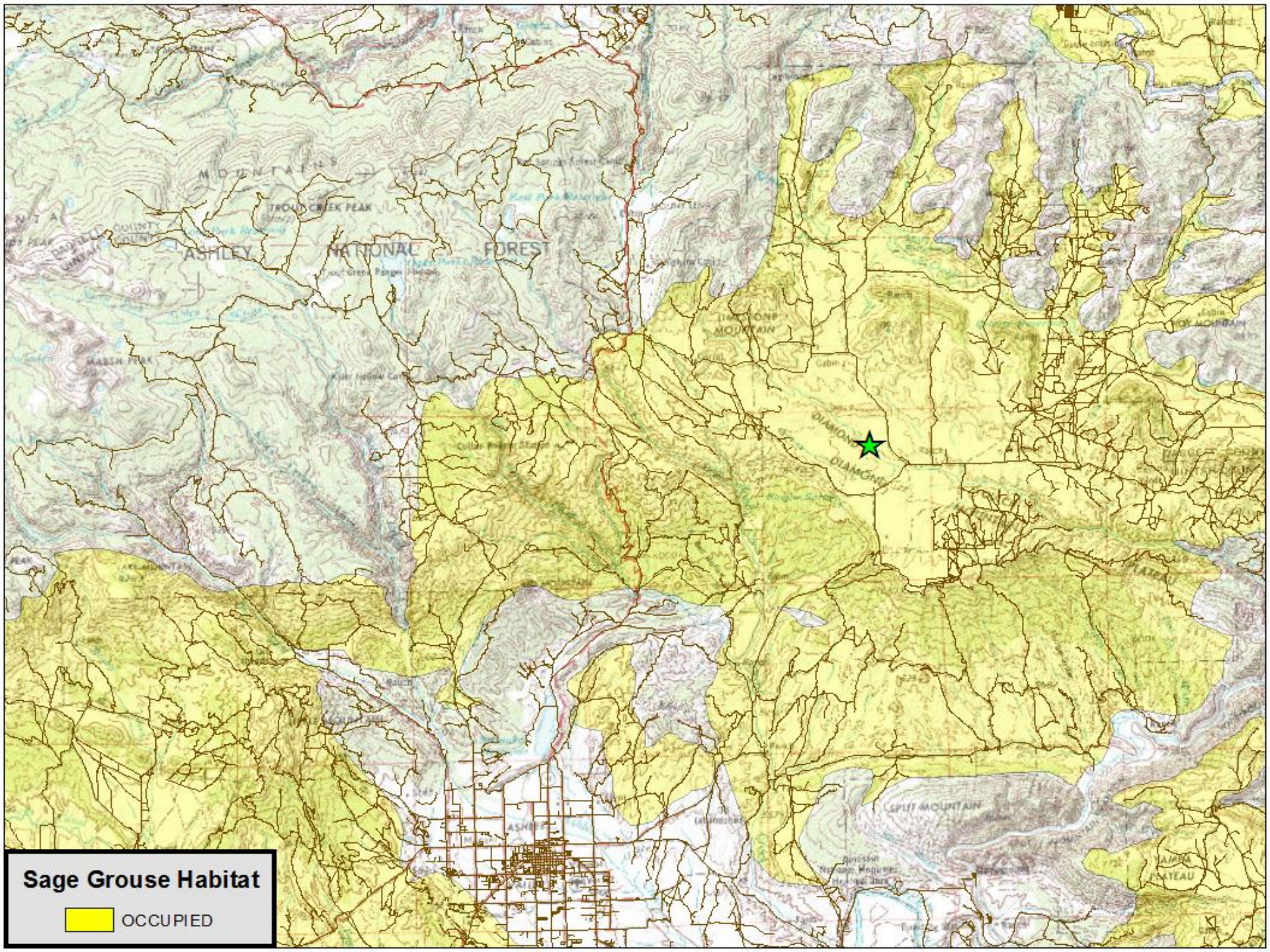
Sage Grouse

Issues and Concerns

- The Project area is in one of Utah's 11 Sage Grouse Management Areas
- Mineral Drilling can disturb lek activity and nesting behavior
- Governor's Plan for the Conservation of Sage Grouse

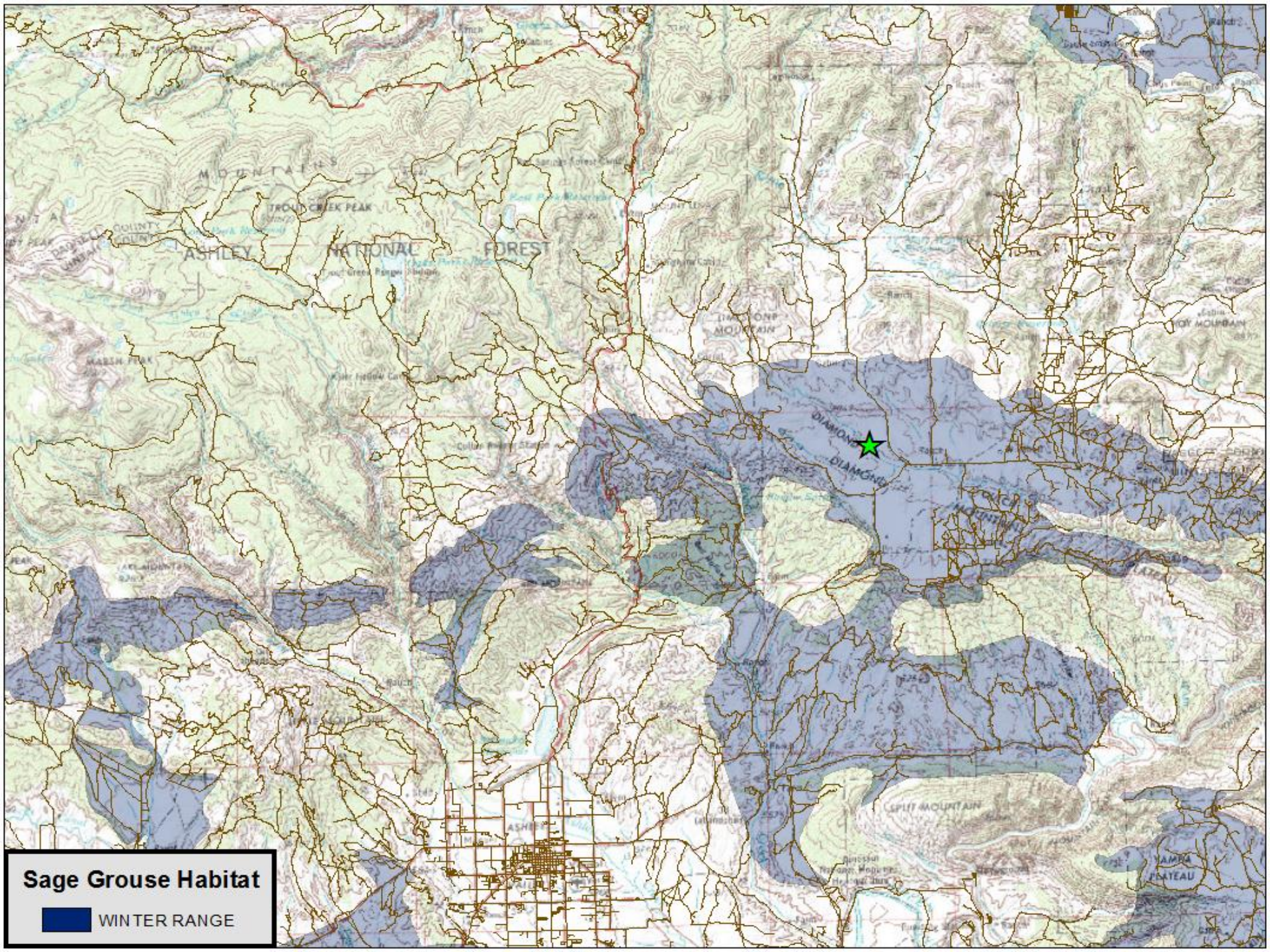






Sage Grouse Habitat

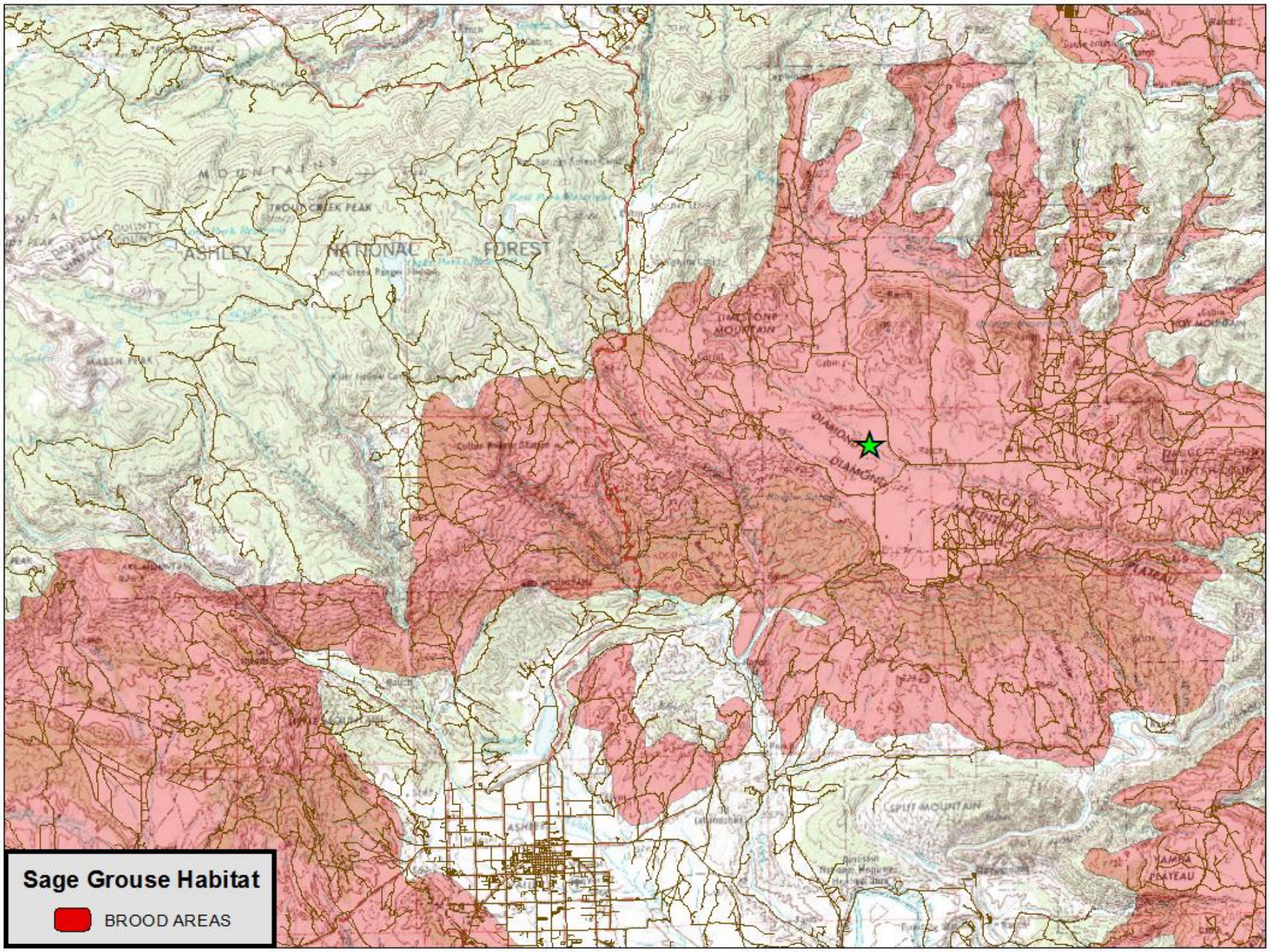
OCCUPIED




Sage Grouse Habitat



WINTER RANGE



Sage Grouse Habitat

 BROOD AREAS

Drill Sites & Grouse Impact Mitigation

- 33 Drill pads were scaled back to 17 for the first season
- Avoid drilling during strutting (Breeding season is April - June)
- Phase drilling – begin in areas with minimal impact potential
- Avoid wet meadow areas where sagegrouse tend to nest
- Locate drill sites with minimal sagebrush
- Locate drill pads near existing roads to minimize the need for new roads
- Reclaim pads with a seed mix beneficial to sagegrouse
- Use equipment with “fat tires” in order to minimize disturbance to off-road areas.

SEEDING DRILL SITES



BROADCAST SEEDING, SNOW & DRAG HARROWING



LAYDOWN YARD SEEDING



TYPICAL DRILL SITE SEEDING



CONCLUSION

- The Diamond Mountain Exploration Project is succeeding in locating Phosphate and mitigating impacts to Sagegrouse.
- The Sagegrouse population on Diamond Mountain is increasing.
- Seeding of drill sites may improve habitat in the future.
- The numbers of grouse observed on leks near drill sites have remained steady and there are no indications that drilling has impacted the population of Sagegrouse.